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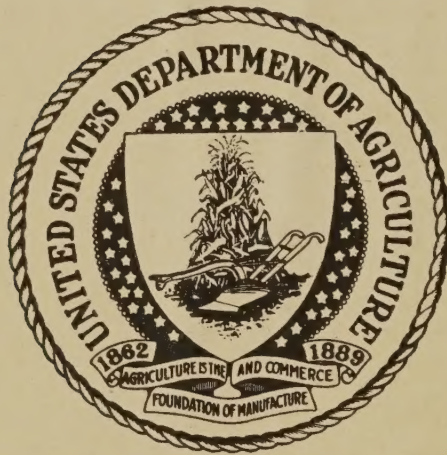
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Tables of drainage areas and
river distances in the Mississippi
river system. 1933

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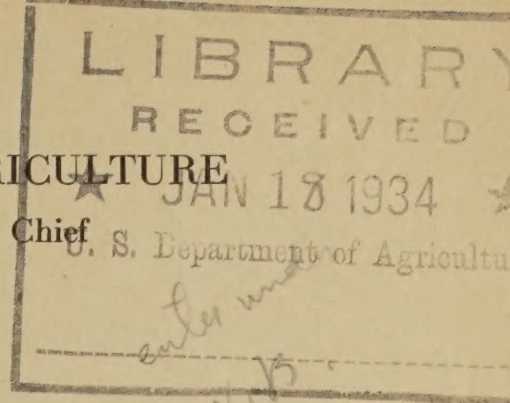


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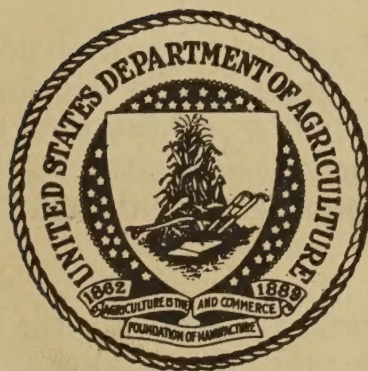
WEATHER BUREAU - CHARLES F. MARVIN, Chief



TABLES OF DRAINAGE AREAS AND RIVER DISTANCES IN THE MISSISSIPPI RIVER SYSTEM

By

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TABLES OF DRAINAGE AREAS AND RIVER DISTANCES IN THE MISSISSIPPI RIVER SYSTEM

INTRODUCTORY NOTES

The Mississippi River System forms a fan-shaped area, with the handle stretching through Louisiana to the Gulf of Mexico, and the fan proper extending northeastward into New York, northward into Wisconsin and Minnesota, and northwestward into Montana and Canada. It drains 30 States wholly or in part, or all of the States east of the Rocky Mountains, except Florida, South Carolina, Delaware, New Jersey, and the New England States, and possibly Michigan. In the following tables no part of Michigan has been included, although some drainage maps place small portions of that State in the Mississippi System. Of course, through the Chicago Drainage Canal and the Illinois River some Michigan rain and snow water reaches the Mississippi, but this is in an artificial way, and the natural basins only are considered in the areas given in the tables appearing herein.

The deepest trough or depression in the Mississippi System extends from the Gulf to the mouth of the Ohio, thence up the Ohio to the head of that stream at Pittsburgh, a distance of 2,048.7 miles above the Head of the Passes of the Mississippi. The average elevation of the water surface at Pittsburgh is about 703 feet above mean sea level, while at Sioux City, Iowa, on the Missouri, 2,032 miles above the Head of the Passes, it is about 1,081 feet above mean sea level, and at Fort Ripley, Minn., on the Mississippi, 2,059 miles above the Head of the Passes, it is about 1,138 feet above mean sea level.

The region of heaviest precipitation in the entire system is a small area in the southwestern part of North Carolina, where the annual average is about 80 inches. The region of least precipitation is the plateau country immediately to the east of the Rocky Mountains, where the annual average ranges between 10 and 20 inches.

LIST OF TABLES

Drainage areas of the eight principal basins comprising the Mississippi River System, in square miles, one table.

Drainage areas of subbasins, in square miles, seven tables.

Drainage areas above river gages, in square miles, and distances of gages above mouths of rivers, in miles, eight tables.

Confluence distances, or distances between mouths of tributary streams, in miles, seven tables.

EXPLANATORY MATTER

The names of all streams are listed in order of confluence, beginning with the headwaters.

AREAS

The names and areas of subbasins directly tributary to the trunk stream are set flush with the left and right borders of the table. Subdivisions of a subbasin are farther inset, and the sum of the areas of each group of insets equals the area of the subbasin next below the group, in a line that is one space longer on both the left and right sides. The sum of the areas of basins of streams that are directly tributary to the trunk stream equals the total area of the entire basin of the trunk.

The letter (*a*) to the right of the name of a direct tributary of a trunk stream indicates that this tributary, at its confluence with another, also bearing the letter (*a*), forms the trunk stream. Confluent streams forming a tributary (either a direct tributary of the trunk stream or an indirect tributary) also bear the letter (*a*) and the name of the stream formed by the junction is the first one below the inset group in which the confluents are included.

The *Des Moines River* (see p. 4) is given as an example of the foregoing: The *West Des Moines (a)* and *East Des Moines (a)* by their confluence form the *Des Moines*, and the *Raccoon* is another direct tributary to the *Des Moines*. The sum of the areas of the *West Des Moines*, the *East Des Moines*, the *Raccoon*, and the *Des Moines and minor tributaries* represents the area of the entire basin of the *Des Moines*. The *Des Moines* itself is a direct tributary of the *Upper Mississippi* and the area of its basin (14,407) is in the extreme right column of the table; it and the areas of the other direct tributaries, which are in the same column, comprise the area of the entire *Upper Mississippi Basin*.

Drainage areas lying above the river gages used by the United States Weather Bureau are given in tables following the tables of areas of basins and subbasins.

Maps used in determination of areas were issued by the United States Geological Survey, the Corps of Engineers of the United States Army, and the provincial governments of Canada. In measuring the various areas the average of a series of observed rolling planimeter readings was carefully adjusted in order that the sum of the areas in each degree quadrangle would equal the known area of the quadrangle, as published in United States Geological Survey Bulletin No. 650. Planimeter work was done by the United States Weather Bureau.

INDETERMINATE AREAS

The diversion of water from Lake Michigan through the Chicago Drainage Canal makes the actual drainage area of the Illinois River indeterminate. The natural drainage area is given in the tables.

The following-described areas have no apparent surface drainage and have not been included in the areas given in the tables. They were omitted largely because it is impossible to determine the basin (if any) to which they are contributive.

An area of 3,981 square miles, centered about latitude 42° and longitude 108°, lying in Wyoming, south and west of the North Platte Basin.

An area of 801 square miles, in northeastern South Dakota, lying adjacent to the basins of the Red River of the North and the James and Minnesota Rivers.

An area of 2,372 square miles, centered about latitude 40° and longitude 103°, lying between tributaries of the South Platte, the Kansas, and the Arkansas Rivers.

DISTANCES

Combined with the tables of drainage areas above river gages there is given the distance of each gage above the mouth of the river on which it is situated. These distances have been obtained from publications of the Engineer Corps of the United States Army, where practicable, and in other cases have been measured by the United States Weather Bureau with a chartometer from the best maps available. Confluence distances, or distances between mouths of tributary streams, have been obtained in the same manner. Distances on the Mississippi River are given in miles above the Head of the Passes instead of the mouth of the river.

MISSISSIPPI RIVER SYSTEM

Drainage Areas (in square miles) of the Eight Principal Basins Comprising the Mississippi River System

Upper Mississippi Basin	188, 299
Missouri Basin	518, 746
Ohio Basin	203, 946
White Basin	27, 759
Arkansas Basin	160, 465
Red Basin (including the Black and its tributary streams)	92, 179
Lower Mississippi Basin	44, 074
Atchafalaya Basin	2, 854
Total area in the Mississippi River System, including the Atchafalaya Basin	1, 238, 322
Total area in the Mississippi River System, not including the Atchafalaya Basin	1, 235, 468

MISSISSIPPI RIVER SYSTEM—UPPER MISSISSIPPI BASIN

Drainage areas (in square miles) of the subbasins comprising the Upper Mississippi Basin; this basin includes all the drainage above the mouth of the Ohio River, except that of the Missouri Basin

Crow Wing	3, 671 ✓
Crow	2, 876 ✓
Cottonwood (b)	1, 258
Blue Earth (b)	3, 632
Minnesota and minor tributaries (b)	11, 788
Minnesota, entire basin	16, 678 ✓
St. Croix	7, 649 ✓
Flambeau (c)	1, 942
Red Cedar (c)	1, 906
Chippewa and minor tributaries (c)	5, 649
Chippewa, entire basin	9, 497 ✓
Black (Wisconsin)	2, 353 ✓
Tomahawk (d)	560
Spirit (d)	179
Wisconsin and minor tributaries (d)	11, 053

(b) Included in "Minnesota, entire basin."

(c) Included in "Chippewa, entire basin."

(d) Included in "Wisconsin, entire basin."

4 DRAINAGE AREAS IN THE MISSISSIPPI RIVER SYSTEM

Drainage areas (in square miles) of the subbasins comprising the Upper Mississippi Basin; this basin includes all the drainage above the mouth of the Ohio River, except that of the Missouri Basin—Continued

Wisconsin, entire basin	11,792
Turkey	1,661
Maquoketa	1,950
Wapsipinicon	2,482
Pecatonica (e)	2,638
Kishwaukee (e)	1,232
Green (e)	1,024
Rock and minor tributaries (e)	5,968
Rock, entire basin	10,862
Shellrock (f)	2,617
Cedar and minor tributaries (f)	5,225
Cedar, entire basin (g)	7,842
Iowa and minor tributaries (g)	4,652
Iowa, entire basin	12,494
Skunk	4,241
West Des Moines (a) (h)	2,238
East Des Moines (a) (h)	1,189
Raccoon (h)	3,589
Des Moines and minor tributaries (h)	7,391
Des Moines, entire basin	14,407
Fabius	1,560
Salt	2,871
Desplaines (a) (i)	1,397
Iroquois (j)	2,058
Kankakee and minor tributaries (j)	3,120
Kankakee, entire basin (a) (i)	5,178
Fox (i)	2,562
Vermilion (i)	1,306
Mackinaw (i)	1,215
Spoon (i)	1,834
South Fork-Sangamon (k)	1,127
Salt Creek (k)	1,955
Sangamon and minor tributaries (k)	2,328
Sangamon, entire basin (i)	5,410
Crooked Creek (i)	1,362
Macoupin (i)	1,007
Illinois and minor tributaries (i)	6,825
Illinois, entire basin	28,096
Bourbeuse (l)	806
Big (l)	914
Meramec and minor tributaries (l)	2,124
Meramec, entire basin	3,844
Kaskaskia	5,823
Big Muddy	2,385
Little River (Headwater Diversion)	1,197
Upper Mississippi and minor tributaries	39,910
Upper Mississippi, entire basin	188,299

(a) See areas under explanatory matter.

(e) Included in "Rock, entire basin."

(f) Included in "Cedar, entire basin."

(g) Included in "Iowa, entire basin."

(h) Included in "Des Moines, entire basin."

(i) Included in "Illinois, entire basin."

(j) Included in "Kankakee, entire basin."

(k) Included in "Sangamon, entire basin."

(l) Included in "Meramec, entire basin."

Drainage areas lying above river gages, and distances of river gages above mouth of river. The name of the river is in parentheses to the right of the station name

<i>Station and river</i>	<i>Area</i>	<i>Distance</i>
Mankato, Minn. (Minnesota) (b) -----	14, 781	108
Chippewa Falls, Wis. (Chippewa) -----	5, 511	77
Durand, Wis. (Chippewa) -----		17. 4
Tomahawk, Wis. (Spirit) -----	178	1
Rhineland, Wis. (Wisconsin) -----	1, 120	357
Merrill, Wis. (Wisconsin) -----	2, 676	303
Wausau, Wis. (Wisconsin) -----	2, 977	282
Knowlton, Wis. (Wisconsin) -----	4, 429	256
Wisconsin Rapids, Wis. (Wisconsin) -----	5, 294	216
Portage, Wis. (Wisconsin) -----	7, 979	116
Moline, Ill. (Rock) -----	10, 771	7. 0
Cedar Rapids, Iowa (Cedar) -----	6, 573	80. 6
Iowa City, Iowa (Iowa) -----	3, 150	66. 6
Wapello, Iowa (Iowa) -----	12, 387	15. 4
Augusta, Iowa (Skunk) -----	4, 180	12
Van Meter, Iowa (Raccoon) -----	3, 408	29. 7
Boone, Iowa (Des Moines) -----	5, 513	257. 8
Des Moines, Iowa (Des Moines) (c) -----	6, 201	200. 5
Tracy, Iowa (Des Moines) -----	12, 458	129. 5
Ottumwa, Iowa (Des Moines) -----	13, 328	93. 2
Keosauqua, Iowa (Des Moines) -----	13, 992	50. 7
New London, Mo. (Salt) -----	2, 467	33. 5
Kankakee, Ill. (Kankakee) -----	4, 547	33
Morris, Ill. (Illinois) -----	7, 599	263. 3
Peru, Ill. (Illinois) -----	12, 035	222. 4
Henry, Ill. (Illinois) -----	12, 983	196. 1
Peoria, Ill. (Illinois) -----	13, 672	162. 3
Havana, Ill. (Illinois) -----	17, 691	119. 9
Beardstown, Ill. (Illinois) -----	23, 587	88. 6
Pearl, Ill. (Illinois) -----	26, 550	43. 2
Union, Mo. (Bourbeuse) -----	765	5. 0
Steelville, Mo. (Meramec) -----	764	143. 4
Pacific, Mo. (Meramec) -----	2, 729	49. 0
Valley Park, Mo. (Meramec) -----	3, 759	23. 6
Fort Ripley, Minn. (Mississippi) -----	11, 153	2, 059. 3
Coon Rapids, Minn., Power Dam (Mississippi) -----		1, 945. 3
St. Anthonys Falls, Minn., Dam (Mississippi) -----		1, 927. 9
Twin City, Minn., Dam (Mississippi) -----		1, 924. 4
St. Paul, Minn. (Mississippi) -----	36, 799	1, 918. 7
Hastings, Minn., Dam (Mississippi) -----		1, 893. 6
Dam No. 3 (Mississippi) (u) -----		1, 872. 7
Red Wing, Minn. (Mississippi) -----	46, 718	1, 870. 6
Reads, Minn. (Mississippi) (d) -----	56, 764	1, 842. 8
Dam No. 4 (Mississippi) -----		1, 830. 8
Dam No. 5 (Mississippi) (u) -----		1, 816. 8
Dam No. 5A (Mississippi) (u) -----		1, 807. 5
Winona, Minn. (Mississippi) -----	59, 457	1, 805. 2
Dam No. 6 (Mississippi) (u) -----		1, 793. 5
Dam No. 7 (Mississippi) (u) -----		1, 780. 7
La Crosse, Wis. (Mississippi) -----	63, 191	1, 776. 6
Dam No. 8 (Mississippi) (u) -----		1, 758. 6
Lansing, Iowa (Mississippi) -----	66, 599	1, 741. 6
Dam No. 9 (Mississippi) (u) -----		1, 726. 0
Prairie du Chien, Wis. (Mississippi) -----	67, 303	1, 712. 8
Dam No. 10 (Mississippi) (u) -----		1, 684. 4
Dam No. 11 (Mississippi) (u) -----		1, 669. 5
Dubuque, Iowa (Mississippi) -----	81, 978	1, 656. 5
Dam No. 12 (Mississippi) (u) -----		1, 641. 6
Dam No. 13 (Mississippi) (u) -----		1, 611. 6
Clinton, Iowa (Mississippi) -----	85, 528	1, 593. 9
Le Claire, Iowa (Mississippi) -----	88, 220	1, 572. 5

(b) Area includes Blue Earth Basin.

(c) Area does not include Raccoon Basin.

(d) Area includes Chippewa Basin.

(u) Site of proposed lock and dam.

Drainage areas lying above river gages, and distances of river gages above mouth of river. The name of the river is in parentheses to the right of the station name—
Continued

<i>Station and river</i>	<i>Area</i>	<i>Distance</i>
Dam No. 14 (Mississippi) (u)-----	-----	1, 568. 7
Dam No. 15 (Mississippi)-----	-----	1, 558. 6
Davenport, Iowa (Mississippi)-----	88, 403	1, 558. 5
Muscatine, Iowa (Mississippi)-----	99, 501	1, 530. 8
Dam No. 16 (Mississippi) (u)-----	-----	1, 530. 7
Dam No. 17 (Mississippi) (u)-----	-----	1, 512. 8
Keithsburg, Ill. (Mississippi)-----	112, 956	1, 504. 1
Dam No. 18 (Mississippi) (u)-----	-----	1, 482. 1
Keokuk, Iowa, Dam (Mississippi)-----	-----	1, 437. 8
Keokuk, Iowa (gage) (Mississippi)-----	118, 993	1, 437. 4
Warsaw, Ill. (Mississippi) (e)-----	133, 406	1, 432. 8
Dam No. 20 (Mississippi) (u)-----	-----	1, 416. 5
Quincy, Ill. (Mississippi)-----	135, 132	1, 400. 4
Dam No. 21 (Mississippi) (u)-----	-----	1, 397. 2
Hannibal, Mo. (Mississippi)-----	137, 303	1, 381. 6
Dam No. 22 (Mississippi) (u)-----	-----	1, 375. 3
Louisiana, Mo. (Mississippi)-----	140, 738	1, 352. 4
Dam No. 23 (Mississippi) (u)-----	-----	1, 349. 0
Dam No. 24 (Mississippi) (u)-----	-----	1, 328. 1
Dam No. 25 (Mississippi) (u)-----	-----	1, 309. 5
Grafton, Ill. (Mississippi)-----	171, 492	1, 285. 7
Dam No. 26 (Mississippi) (u)-----	-----	1, 282. 8
Alton, Ill. (Mississippi)-----	171, 660	1, 270. 5
St. Louis, Mo. (Mississippi)-----	691, 096	1, 247. 3
Chester, Ill. (Mississippi)-----	702, 353	1, 177. 3
Cape Girardeau, Mo. (Mississippi)-----	705, 813	1, 119. 8

(e) Area includes Des Moines Basin.

(u) Site of proposed lock and dam.

Confluence distances, or distances between mouths of tributary streams

<i>From mouth of—</i>	<i>To mouth of—</i>	<i>Distance</i>
Crow Wing-----	Mississippi-----	-----
Crow-----	do-----	1, 958. 9
Cottonwood-----	Minnesota-----	-----
Blue Earth-----	do-----	-----
Minnesota-----	Mississippi-----	1, 923. 4
St. Croix-----	do-----	1, 891. 1
Flambeau-----	Chippewa-----	121. 8
Red Cedar-----	do-----	27. 2
Chippewa-----	Mississippi-----	1, 843. 6
Black (Wisconsin)-----	do-----	1, 777. 1
Tomahawk-----	Wisconsin-----	359
Spirit-----	do-----	330
Wisconsin-----	Mississippi-----	1, 709. 1
Turkey-----	do-----	1, 686. 6
Maquoketa-----	do-----	1, 627. 5
Wapsipinicon-----	do-----	1, 579. 7
Pecatonica-----	Rock-----	-----
Kishwaukee-----	do-----	-----
Green-----	do-----	-----
Rock-----	Mississippi-----	1, 554. 8
Shellrock-----	Cedar-----	171. 6
Cedar-----	Iowa-----	28. 4
Iowa-----	Mississippi-----	1, 509. 9
Skunk-----	do-----	1, 471. 3
West Des Moines (a)-----	Des Moines-----	327
East Des Moines (a)-----	do-----	327
Raccoon-----	do-----	200. 0
Des Moines (a)-----	Mississippi-----	1, 434. 5

(a) The Des Moines is formed by the confluence of the West Des Moines and East Des Moines.

Confluence distances, or distances between mouths of tributary streams—Continued

<i>From mouth of—</i>	<i>To mouth of—</i>	<i>Distance</i>
✓ Fabius	Mississippi	1, 396. 0
✓ Salt	do	1, 354. 6
✓ Desplaines (b)	Illinois	273
✓ Iroquois	Kankakee	-----
✓ Kankakee (b)	Illinois	273
✓ Fox	do	239. 9
✓ Vermilion	do	226. 4
✓ Mackinaw	do	150. 9
✓ Spoon	do	120. 4
✓ South Fork—Sangamon	Sangamon	-----
Salt Creek	do	-----
Sangamon	Illinois	99. 0
Crooked Creek	do	83. 8
Macoupin	do	18. 6
✓ Illinois (b)	Mississippi	1, 285. 8
Missouri	do	1, 263. 1
Bourbeuse	Meramec	64. 9
Big	do	37. 7
Meramec	Mississippi	1, 228. 5
Kaskaskia	do	1, 185. 8
Big Muddy	do	1, 144. 3
Little River (Headwater Diver-	do	1, 114. 8
sion).		
Ohio	do	1, 067. 7

(b) The Illinois is formed by the confluence of the Desplaines and Kankakee.

MISSISSIPPI RIVER SYSTEM—MISSOURI BASIN

Drainage areas (in square miles) of the subbasins comprising the Missouri Basin

Madison (a)	2, 501
Beaverhead (a) (g)	4, 701
Bighole (a) (g)	2, 895
Jefferson and minor tributaries (g)	2, 077
Jefferson, entire basin (a)	9, 673
Gallatin	1, 870
Smith	2, 019
Sun	2, 006
Teton (h)	1, 895
Marias and minor tributaries (h)	7, 170
Marias, entire basin	9, 065
Judith	2, 767
Musselshell	9, 697
Milk (b)	23, 009
Poplar (c)	3, 413
Big Muddy Creek (d)	3, 334
Clark Fork (i)	2, 765
Little Wind (a) (j)	2, 021
Wind (a) (j)	2, 257
Greybull (j)	1, 191
Shoshone (j)	2, 595
Little Bighorn (j)	1, 276
Bighorn and minor tributaries (j)	13, 603
Bighorn, entire basin (i)	22, 943
Tongue (i)	5, 411
Little Powder (k)	2, 048
Powder and minor tributaries (k)	11, 352
Powder, entire basin (i)	13, 400
Yellowstone and minor tributaries (i)	25, 697

(a) See areas under explanatory matter.

(b) Includes 8,225 square miles in Canada.

(c) Includes 1,241 square miles in Canada.

(d) Includes 885 square miles in Canada.

(g) Included in "Jefferson, entire basin."

(h) Included in "Marias, entire basin."

(i) Included in "Yellowstone, entire basin."

(j) Included in "Bighorn, entire basin."

(k) Included in "Powder, entire basin."

Drainage areas (in square miles) of the subbasins comprising the Missouri Basin—
Continued

Yellowstone, entire basin	70,216
Little Missouri	9,168
Knife	2,600
Heart	3,335
Cannonball	4,245
Grand (S.Dak.)	5,662
Moreau	5,322
Belle Fourche (l)	7,225
Cherry Creek (l)	1,836
Cheyenne and minor tributaries (l)	16,195
Cheyenne, entire basin	25,256
Bad	3,163
Little White (m)	1,507
White and minor tributaries (m)	8,499
White, entire basin	10,006
Keyapaha (n)	1,738
Niobrara and minor tributaries (n)	10,678
Niobrara, entire basin	12,416
James	19,394
Vermilion	2,592
Big Sioux	8,731
Floyd	881
Little Sioux	4,454
Boyer	1,140
South Platte, entire basin (a) (o)	24,100
Sweetwater (p)	2,307
Laramie (p)	4,583
North Platte and minor tributaries (p)	25,745
North Platte, entire basin (a) (o)	32,635
South Loup (q)	2,342
Middle Loup and minor tributaries (q)	5,510
Middle Loup, entire basin (a) (r)	7,852
North Loup (a) (r)	4,118
Loup and minor tributaries (r)	2,720
Loup, entire basin (o)	14,690
Elkhorn (o)	6,665
Platte and minor tributaries (o)	8,436
Platte, entire basin	86,526
Nishnabotna	3,094
Nodaway	1,777
Platte (Iowa-Mo.)	2,427
Saline (s)	3,425
South Solomon (a) (t)	2,260
North Solomon (a) (t)	2,718
Solomon and minor tributaries (t)	1,868
Solomon, entire basin (s)	6,846
Smoky Hill and minor tributaries (s)	9,680
Smoky Hill, entire basin (a) (u) (x)	19,951
Republican (a) (u)	22,583
Big Blue (u)	9,582
Kansas and minor tributaries (u)	5,375

(a) See areas under explanatory matter.

(l) Included in "Cheyenne, entire basin."

(m) Included in "White, entire basin."

(n) Included in "Niobrara, entire basin."

(o) Included in "Platte, entire basin."

(p) Included in "North Platte, entire basin."

(q) Included in "Middle Loup, entire basin."

(r) Included in "Loup, entire basin."

(s) Included in "Smoky Hill, entire basin."

(t) Included in "Solomon, entire basin."

(u) Included in "Kansas, entire basin."

(x) The Smoky Hill above the mouth of the Saline drains 8,254 square miles.

Drainage areas (in square miles) of the subbasins comprising the Missouri Basin—
Continued

Kansas, entire basin	57, 491
Thompson Fork (v)	2, 177
Grand and minor tributaries (v) (y)	5, 710
Grand, entire basin (Iowa-Mo.)	7, 887
Chariton	3, 004
Lamine	2, 607
Sac (w)	1, 932
Pomme de Terre (w)	768
Grand (w)	2, 040
Niangua (w)	1, 077
Osage and minor tributaries (w)	9, 249
Osage, entire basin	15, 066
Gasconade	3, 545
Missouri and minor tributaries (e)	77, 387
Missouri, entire basin (f)	518, 746

(e) Includes 361 square miles in Canada.

(f) Includes 10,712 square miles in Canada.

(v) Included in "Grand, entire basin."

(w) Included in "Osage, entire basin."

(y) The Grand above the mouth of Thompson Fork drains 2,668 square miles.

Drainage areas lying above river gages, and distances of river gages above mouth of river. The name of the river is in parentheses to the right of the station name

Station and river	Area	Distance
Billings, Mont. (Yellowstone)	11, 818	346. 0
Miles City, Mont. (Yellowstone) (b)	42, 897	178. 5
Glendive, Mont. (Yellowstone)	66, 865	92. 4
Ashton, S.Dak. (James)	8, 319	310. 0
Huron, S.Dak. (James)	14, 313	227. 0
Akron, Iowa (Big Sioux)	8, 165	56. 0
Merrill, Iowa (Floyd)	776	22. 8
Fort Morgan, Colo. (South Platte)	14, 724	189. 0
North Platte, Nebr. (South Platte)	24, 092	4. 3
Whalen, Wyo. (North Platte)	16, 432	241. 0
North Platte, Nebr. (North Platte)	32, 616	5. 0
Overton, Nebr. (Platte)	59, 124	240. 4
Duncan, Nebr. (Platte)	61, 986	115. 0
Ashland, Nebr. (Platte)		28. 5
Tescott, Kans. (Saline)	2, 825	47. 1
Beloit, Kans. (Solomon)	5, 415	103. 1
Niles, Kans. (Solomon)	6, 767	17. 4
Ellsworth, Kans. (Smoky Hill)	7, 578	231. 9
Lindsborg, Kans. (Smoky Hill)	8, 112	170. 0
Salina, Kans. (Smoky Hill)	8, 243	124. 7
Solomon, Kans. (Smoky Hill) (c)	18, 829	85. 1
Guide Rock, Nebr. (Republican)	19, 720	195. 0
Scandia, Kans. (Republican)	20, 558	131. 3
Concordia, Kans. (Republican)	21, 141	107. 8
Wakefield, Kans. (Republican)	22, 367	26. 3
Beatrice, Nebr. (Big Blue)	3, 822	121. 6
Blue Rapids, Kans. (Big Blue)	8, 342	61. 9
Randolph, Kans. (Big Blue)	9, 099	33. 4
Ogden, Kans. (Kansas)	42, 865	159. 5
Manhattan, Kans. (Kansas) (d)	43, 092	144. 1
Wamego, Kans. (Kansas)	52, 825	123. 9
Topeka, Kans. (Kansas)	54, 637	82. 3
Lawrence, Kans. (Kansas)	56, 085	50. 2
Bonner Springs, Kans. (Kansas)	57, 404	20. 0
Trenton, Mo. (Thompson Fork)	1, 671	25. 0
Gallatin, Mo. (Grand)	2, 248	90. 0

(b) Area does not include Tongue Basin.

(c) Area includes Solomon Basin.

(d) Area does not include Big Blue Basin.

Drainage areas lying above river gages, and distances of river gages above mouth of river. The name of the river is in parentheses to the right of the station name—
Continued

<i>Station and river</i>	<i>Area</i>	<i>Distance</i>
Chillicothe, Mo. (Grand)-----	4, 855	57. 0
Brunswick, Mo. (Grand)-----	7, 883	5. 0
Quenemo, Kans. (Osage)-----	1, 001	438. 0
Ottawa, Kans. (Osage)-----	1, 231	417. 0
La Cygne, Kans. (Osage)-----	2, 731	353. 0
Osceola, Mo. (Osage)-----	8, 211	228. 0
Warsaw, Mo. (Osage)-----	11, 518	172. 0
Bagnell Dam, Mo. (Osage)-----	14, 001	75. 0
Tuscumbia, Mo. (Osage)-----	14, 089	60. 0
St. Thomas, Mo. (Osage)-----	14, 610	37. 6
Osage City, Mo., Missouri-Pacific bridge (Osage)-----	15, 065	1. 0
Arlington, Mo., St. L.-S. F. bridge (Gasconade)-----	2, 816	106. 6
Gascondy, Mo., C., R. I. & P. bridge (Gasconade)-----	3, 144	61. 4
Gasconade, Mo., Missouri-Pacific bridge (Gasconade)-----	3, 544	1. 0
Fort Benton, Mont. (Missouri)-----	24, 497	2, 211. 8
Wolf Point, Mont. (Missouri) (e)-----	82, 345	1, 811. 0
Williston, N.Dak. (Missouri) (f)-----	163, 465	1, 659. 1
Sanish, N.Dak. (Missouri) (g)-----	168, 521	1, 567. 1
Washburn, N.Dak. (Missouri)-----	184, 096	1, 427. 4
Bismarck, N.Dak. (Missouri) (h)-----	186, 181	1, 387. 1
Pierre, S.Dak. (Missouri) (i)-----	244, 189	1, 126. 4
Chamberlain, S.Dak. (Missouri)-----	251, 268	1, 022. 0
Geddes, S.Dak. (Missouri)-----	263, 541	948. 7
Yankton, S.Dak. (Missouri)-----	279, 575	849. 3
Sioux City, Iowa (Missouri)-----	311, 651	768. 9
Blair, Nebr. (Missouri)-----	318, 596	676. 1
Omaha, Nebr. (Missouri)-----	320, 173	637. 2
Plattsmouth, Nebr. (Missouri)-----	407, 419	608. 6
Nebraska City, Nebr. (Missouri)-----	-----	581. 5
St. Joseph, Mo. (Missouri)-----	417, 786	461. 7
Kansas City, Mo. (Missouri)-----	478, 710	380. 5
Waverly, Mo. (Missouri)-----	480, 775	300. 1
Boonville, Mo. (Missouri)-----	495, 242	199. 4
Jefferson City, Mo. (Missouri)-----	-----	145. 6
Hermann, Mo. (Missouri)-----	517, 521	99. 0
St. Charles, Mo. (Missouri)-----	518, 581	27. 8

(e) Includes 8,225 square miles in Canada.

(f) Includes 10,351 square miles in Canada.

(g) The drainage areas above Sanish and above all the stations below Sanish, on the Missouri River, include 10,712 square miles in Canada.

(h) Area does not include Heart Basin.

(i) Area does not include Bad Basin.

Confluence distances, or distances between mouths of tributary streams

<i>From mouth of—</i>	<i>To mouth of—</i>	<i>Distance</i>
Madison (a)-----	Missouri-----	2, 474. 6
Beaverhead (b)-----	Jefferson-----	65. 0
Bighole (b)-----	do-----	65. 0
Jefferson (a) (b)-----	Missouri-----	2, 474. 6
Gallatin-----	do-----	2, 473. 3
Smith-----	do-----	2, 289. 3
Sun-----	do-----	2, 261. 1
Teton-----	Marias-----	2. 0
Marias-----	Missouri-----	2, 189. 9
Judith-----	do-----	2, 123. 6
Musselshell-----	do-----	2, 003. 6
Milk-----	do-----	1, 866. 3
Poplar-----	do-----	1, 784. 7
Big Muddy Creek-----	do-----	1, 734. 6
Clark Fork-----	Yellowstone-----	363. 7
Little Wind (c)-----	Bighorn-----	336. 0

(a) The Missouri is formed by the confluence of the Madison and Jefferson.

(b) The Jefferson is formed by the confluence of the Beaverhead and Bighole.

(c) The Bighorn is formed by the confluence of the Little Wind and Wind.

Confluence distances, or distances between mouths of tributary streams—Continued

<i>From mouth of—</i>	<i>To mouth of—</i>	<i>Distance</i>
✓ Wind (c).....	Bighorn.....	336. 0
✓ Greybull.....	do.....	183. 0
✓ Shoshone.....	do.....	136. 2
✓ Little Bighorn.....	do.....	40. 0
✓ Bighorn (c).....	Yellowstone.....	279. 4
✓ Tongue.....	do.....	181. 5
✓ Little Powder.....	Powder.....	128. 8
✓ Powder.....	Yellowstone.....	146. 6
✓ Yellowstone.....	Missouri.....	1, 689. 6
✓ Little Missouri.....	do.....	1, 515. 7
✓ Knife.....	do.....	1, 449. 5
✓ Heart.....	do.....	1, 382. 2
✓ Cannonball.....	do.....	1, 342. 3
✓ Grand.....	do.....	1, 262. 5
✓ Moreau.....	do.....	1, 239. 4
✓ Belle Fourche.....	Cheyenne.....	116. 0
✓ Cherry Creek.....	do.....	47. 0
✓ Cheyenne.....	Missouri.....	1, 172. 7
✓ Bad.....	do.....	1, 125. 3
✓ Little White.....	White.....	123. 0
✓ White.....	Missouri.....	1, 008. 8
✓ Keyapaha.....	Niobrara.....	58. 0
✓ Niobrara.....	Missouri.....	894. 2
✓ James.....	do.....	843. 5
✓ Vermilion.....	do.....	815. 0
✓ Big Sioux.....	do.....	771. 2
✓ Floyd.....	do.....	767. 0
✓ Little Sioux.....	do.....	702. 3
✓ Boyer.....	do.....	655. 8
✓ South Platte (d).....	Platte.....	309. 8
✓ Sweetwater.....	North Platte.....	484. 0
✓ Laramie.....	do.....	232. 2
✓ North Platte (d).....	Platte.....	309. 8
✓ South Loup.....	Middle Loup.....	25. 2
✓ Middle Loup (e).....	Loup.....	67. 5
✓ North Loup (e).....	do.....	67. 5
✓ Loup (e).....	Platte.....	103. 0
✓ Elkhorn.....	do.....	33. 4
✓ Platte (d).....	Missouri.....	613. 0
✓ Nishnabotna.....	do.....	564. 6
✓ Nodaway.....	do.....	483. 5
✓ Platte.....	do.....	405. 3
✓ Saline.....	Smoky Hill.....	106. 9
✓ South Solomon (f).....	Solomon.....	135. 2
✓ North Solomon (f).....	do.....	135. 2
✓ Solomon (f).....	Smoky Hill.....	85. 2
✓ Smoky Hill (g).....	Kansas.....	169. 2
✓ Republican (g).....	do.....	169. 2
✓ Big Blue.....	do.....	142. 5
✓ Kansas (g).....	Missouri.....	381. 9
✓ Thompson Fork.....	Grand.....	65. 0
✓ Grand.....	Missouri.....	254. 8
✓ Chariton.....	do.....	231. 0
✓ Lamine.....	do.....	204. 8
✓ Sac.....	Osage.....	231. 5
✓ Pomme de Terre.....	do.....	185. 6
✓ Grand.....	do.....	174. 5
✓ Niangua.....	do.....	109. 0
✓ Osage.....	Missouri.....	131. 6
✓ Gasconade.....	do.....	105. 4
✓ Missouri (a).....	Mississippi.....	1, 263. 1

(a) The Missouri is formed by the confluence of the Madison and Jefferson.

(c) The Bighorn is formed by the confluence of the Little Wind and Wind.

(d) The Platte is formed by the confluence of the South Platte and North Platte.

(e) The Loup is formed by the confluence of the Middle Loup and North Loup.

(f) The Solomon is formed by the confluence of the South Solomon and North Solomon.

(g) The Kansas is formed by the confluence of the Smoky Hill and Republican.

MISSISSIPPI RIVER SYSTEM—OHIO BASIN

Drainage areas (in square miles) of the subbasins comprising the Ohio Basin

Conewango Creek (b)	924	
French Creek (b)	1, 234	
Clarion (b)	1, 234	
Little Conemaugh (a) (c)	183	
Stony Creek (a) (c)	481	
Conemaugh and minor tributaries (c)	748	
Conemaugh, entire basin (a) (d)	1, 412	
Loyalhanna Creek (a) (d)	288	
Kiskiminitas and minor tributaries (d)	206	
Kiskiminitas, entire basin (b)	1, 906	
Allegheny and minor tributaries (b)	6, 433	
Allegheny, entire basin (a)		11, 731
Tygart (a) (e)	1, 415	
West Fork—Monongahela (a) (e)	892	
Cheat (e)	1, 400	
Castleman (f)	555	
Youghiogheny and minor tributaries (f)	1, 176	
Youghiogheny, entire basin (e)	1, 731	
Monongahela and minor tributaries (e)	1, 932	
Monongahela, entire basin (a)		7, 370
Mahoning (a) (g)	1, 142	
Shenango (a) (g)	1, 036	
Beaver and minor tributaries (g)	949	
Beaver, entire basin		3, 127
Walhonding (a) (h)	2, 252	
Stillwater Creek (i)	485	
Tuscarawas and minor tributaries (i)	2, 105	
Tuscarawas, entire basin (a) (h)	2, 590	
Muskingum and minor tributaries (h)	3, 196	
Muskingum, entire basin		8, 038
Little Kanawha		2, 283
Hocking		1, 200
South Fork—New (a) (j)	317	
North Fork—New (a) (j)	297	
Greenbrier (j)	1, 592	
New and minor tributaries (j)	4, 782	
New, entire basin (a) (k)	6, 988	
Gauley (a) (k)	1, 424	
Elk (k)	1, 549	
Coal (k)	860	
Pocatalico (k)	362	
Kanawha and minor tributaries (k)	1, 118	
Kanawha, entire basin		12, 301
Guyandot		1, 698
Twelvepole Creek		458
Tug Fork (a) (l)	1, 520	
Levisa Fork (a) (l)	2, 301	
Big Sandy and minor tributaries (l)	454	
Big Sandy, entire basin		4, 275
Olentangy (m)	536	
Scioto and minor tributaries (m)	5, 974	

(a) See areas under *explanatory matter*.

(b) Included in "Allegheny, entire basin."

(c) Included in "Conemaugh, entire basin."

(d) Included in "Kiskiminitas, entire basin."

(e) Included in "Monongahela, entire basin."

(f) Included in "Youghiogheny, entire basin."

(g) Included in "Beaver, entire basin."

(h) Included in "Muskingum, entire basin."

(i) Included in "Tuscarawas, entire basin."

(j) Included in "New, entire basin."

(k) Included in "Kanawha, entire basin."

(l) Included in "Big Sandy, entire basin."

(m) Included in "Scioto, entire basin."

Drainage areas (in square miles) of the subbasins comprising the Ohio Basin—Con.

Scioto, entire basin	6,510
Little Miami	1,755
South Fork—Licking (<i>n</i>)	950
Licking and minor tributaries (<i>n</i>)	2,685
Licking, entire basin	3,635
Stillwater (<i>o</i>)	673
Mad (<i>o</i>)	656
Whitewater (<i>o</i>)	1,483
Miami and minor tributaries (<i>o</i>)	2,573
Miami, entire basin	5,385
Middle Fork—Kentucky (<i>p</i>)	531
North Fork—Kentucky and minor tributaries (<i>p</i>)	1,325
North Fork—Kentucky, entire basin (<i>a</i>) (<i>q</i>)	1,856
South Fork—Kentucky (<i>a</i>) (<i>q</i>)	766
Dix (<i>q</i>)	453
Kentucky and minor tributaries (<i>q</i>)	3,846
Kentucky, entire basin	6,921
Salt	2,801
Barren (<i>r</i>)	2,232
Rough (<i>r</i>)	999
Green and minor tributaries (<i>r</i>)	5,966
Green, entire basin	9,197
Tippecanoe (<i>s</i>)	1,936
Vermilion (<i>s</i>)	1,372
Sugar Creek (<i>s</i>)	807
Embarrass (<i>s</i>)	2,303
West Fork—White (<i>a</i>) (<i>t</i>)	5,367
East Fork—White (<i>a</i>) (<i>t</i>)	5,622
White and minor tributaries (<i>t</i>)	202
White, entire basin (<i>s</i>)	11,191
Skillet Fork (<i>u</i>)	979
Little Wabash and minor tributaries (<i>u</i>)	2,155
Little Wabash, entire basin (<i>s</i>)	3,134
Wabash and minor tributaries (<i>s</i>)	11,984
Wabash, entire basin	32,727
Saline	1,190
Tradewater	1,001
New (<i>v</i>)	394
Clear Fork—Cumberland (<i>v</i>)	300
South Fork—Cumberland and minor tributaries (<i>v</i>)	672
South Fork—Cumberland, entire basin (<i>w</i>)	1,366
Caney Fork—Cumberland (<i>w</i>)	2,582
Cumberland and minor tributaries (<i>w</i>)	13,932
Cumberland, entire basin	17,880
North Fork—Holston (<i>a</i>) (<i>x</i>)	741
Watauga (<i>y</i>)	838
South Fork—Holston and minor tributaries (<i>y</i>)	1,186
South Fork—Holston, entire basin (<i>a</i>) (<i>x</i>)	2,024
Holston and minor tributaries (<i>x</i>)	1,068

(*a*) See areas under explanatory matter.

(*n*) Included in "Licking, entire basin."

(*o*) Included in "Miami, entire basin."

(*p*) Included in "North Fork—Kentucky, entire basin."

(*q*) Included in "Kentucky, entire basin."

(*r*) Included in "Green, entire basin."

(*s*) Included in "Wabash, entire basin."

(*t*) Included in "White, entire basin."

(*u*) Included in "Little Wabash, entire basin."

(*v*) Included in "South Fork—Cumberland, entire basin."

(*w*) Included in "Cumberland, entire basin."

(*x*) Included in "Holston, entire basin."

(*y*) Included in "South Fork—Holston, entire basin."

Drainage areas (in square miles) of the subbasins comprising the Ohio Basin—Con.

Cumberland, entire basin—Continued.

Holston, entire basin (a) (z)-----	3, 833	
Pigeon (bb)-----	650	
Nolichucky (bb)-----	1, 757	
Little Pigeon (bb)-----	383	
French Broad and minor tributaries (bb)---	2, 302	
French Broad, entire basin (a) (z)-----	5, 092	
Little Tennessee (z)-----	2, 624	
Emery (cc)-----	873	
Clinch and minor tributaries (cc)-----	3, 440	
Clinch, entire basin (z)-----	4, 313	
Hiwassee (z)-----	2, 736	
Elk (z)-----	2, 210	
Duck (z)-----	3, 472	
Tennessee and minor tributaries (z)-----	16, 387	
Tennessee, entire basin-----		40, 667
Ohio and minor tributaries-----		21, 796
Ohio, entire basin-----		203, 946

(a) See areas under *explanatory matter*.

(z) Included in "Tennessee, entire basin."

(bb) Included in "French Broad, entire basin."

(cc) Included in "Clinch, entire basin."

MISSISSIPPI RIVER SYSTEM—OHIO BASIN

Drainage areas lying above river gages, and distances of river gages above mouth of river. The name of the river is in parentheses to the right of the station name

<i>Station and river</i>	<i>Area</i>	<i>Distance</i>
Johnstown, Pa. (Stony Creek)-----	480	1. 2
Saltsburg, Pa. (Kiskiminitas)-----	1, 701	27. 2
Olean, N.Y. (Allegheny)-----	1, 137	259
Warren, Pa. (Allegheny) (b)-----	3, 134	191. 7
Franklin, Pa. (Allegheny) (c)-----	5, 952	126. 4
Parkers Landing, Pa. (Allegheny) (d)-----	7, 653	85. 0
Lock No. 8 (Allegheny)-----	8, 837	52. 7
Lock No. 7 (Allegheny)-----	8, 957	46. 0
Lock No. 6 (Allegheny)-----	9, 302	37. 0
Lock No. 5 (Allegheny) (e)-----	9, 329	30. 6
Lock No. 4 (Allegheny)-----	11, 403	24. 1
Lock No. 3 (Allegheny)-----	11, 517	16. 7
Lock No. 2 (Allegheny)-----	11, 631	7. 0
Lock No. 1 (Allegheny)-----	11, 727	1. 7
Philippi, W.Va. (Tygart)-----	923	45. 8
Weston, W.Va. (West Fork—Monongahela)-----	133	69. 0
Rowlesburg, W.Va. (Cheat)-----	917	44. 5
Confluence, Pa. (Youghiogheny) (f)-----	982	68. 0
West Newton, Pa. (Youghiogheny)-----	1, 506	19. 4
Lock No. 15, West Virginia (Monongahela)-----	2, 437	124. 2
Lock No. 14, West Virginia (Monongahela)-----	2, 576	115. 0
Lock No. 13, West Virginia (Monongahela)-----	2, 587	111. 6
Lock No. 12, West Virginia (Monongahela)-----	2, 590	109. 1
Lock No. 11, West Virginia (Monongahela)-----	2, 610	104. 1
Lock No. 10, West Virginia (Monongahela)-----	2, 683	101. 5
Lock No. 9, West Virginia (Monongahela)-----		92. 4
Lock No. 8, Pennsylvania (Monongahela)-----	2, 764	90. 6
Lock No. 7, Pennsylvania (Monongahela)-----	4, 447	84. 8
Lock No. 6, Pennsylvania (Monongahela)-----	4, 627	68. 3
Lock No. 5, Pennsylvania (Monongahela)-----	4, 983	56. 5
Lock No. 4, Pennsylvania (Monongahela)-----	5, 223	41. 5
Lock No. 3, Pennsylvania (Monongahela)-----	5, 350	23. 8

(b) Area includes Conewango Creek Basin.

(c) Area includes French Creek Basin.

(d) Area includes Clarion Basin.

(e) Area does not include Kiskiminitas Basin.

(f) Area includes Castleman Basin.

Drainage areas lying above river gages, and distances of river gages above mouth of river. The name of the river is in parentheses to the right of the station name—
Continued

<i>Station and river</i>	<i>Area</i>	<i>Distance</i>
McKeesport, Pa. (Monongahela) (g)-----	7, 161	14. 6
Lock No. 2, Pennsylvania (Monongahela)-----	7, 321	11. 2
Lock No. 1, Pennsylvania (Monongahela)-----	7, 368	2. 0
Sharon, Pa. (Shenango)-----	576	28. 2
Beaver Falls, Pa. (Beaver)-----	3, 086	4. 0
Walhonding, Ohio (Walhonding)-----	1, 537	22. 6
Uhrichsville, Ohio (Stillwater Creek)-----	367	7. 6
Dover, Ohio (Tuscarawas)-----	1, 405	60. 5
Newcomerstown, Ohio (Tuscarawas)-----	2, 432	22. 6
Coshocton, Ohio (Tuscarawas)-----	4, 843	. 2
Lock No. 11 (Muskingum)-----	6, 049	83. 9
Lock No. 10 (Muskingum) (h)-----	6, 840	75. 8
Lock No. 9 (Muskingum)-----	7, 168	66. 8
Lock No. 8 (Muskingum)-----	7, 376	56. 0
Lock No. 7 (Muskingum)-----	7, 411	48. 2
Lock No. 6 (Muskingum)-----	7, 449	39. 1
Lock No. 5 (Muskingum)-----	7, 465	33. 0
Lock No. 4 (Muskingum)-----	7, 937	24. 7
Lock No. 3 (Muskingum)-----	7, 978	13. 9
Lock No. 2 (Muskingum)-----	8, 020	5. 8
Lock No. 1 (Muskingum)-----	8, 038	. 2
Glenville, W. Va. (Little Kanawha)-----	365	103. 0
Creston, W. Va. (Little Kanawha) (i)-----	1, 214	48. 0
Lock No. 5 (Little Kanawha)-----	1, 330	40. 5
Lock No. 4 (Little Kanawha)-----	1, 351	31. 0
Lock No. 3 (Little Kanawha)-----	1, 511	25. 5
Lock No. 2 (Little Kanawha)-----	2, 086	14. 5
Lock No. 1 (Little Kanawha)-----	2, 251	3. 5
Athens, Ohio (Hocking)-----	944	31. 6
Renick, W. Va. (Greenbrier)-----	678	75
Camden on Gauley, W. Va. (Gauley)-----	238	71
Ivanhoe, Va. (New)-----	1, 311	194
Radford, Va. (New)-----	2, 761	145
Glenlyn, Va. (New)-----	3, 859	95
Hinton, W. Va. (New)-----	6, 288	63
Clay, W. Va. (Elk)-----	1, 016	53. 2
Sissonville, W. Va. (Pocatalico)-----	224	27. 5
Kanawha Falls, W. Va. (Kanawha)-----	8, 415	95. 0
Lock No. 2 (Kanawha)-----	8, 552	84. 5
Lock No. 3 (Kanawha)-----	8, 687	79. 5
Lock No. 4 (Kanawha)-----	8, 794	73. 2
Lock No. 5 (Kanawha)-----	8, 872	67. 2
Charleston, W. Va. (Kanawha)-----	10, 495	58. 0
Lock No. 6 (Kanawha)-----	10, 587	54. 0
Lock No. 7 (Kanawha)-----	11, 475	46. 2
Lock No. 8 (Kanawha)-----	11, 867	36. 0
Lock No. 9 (Kanawha)-----	12, 003	25. 2
Lock No. 10 (Kanawha)-----	12, 038	19. 0
Lock No. 11 (Kanawha)-----	12, 298	1. 8
Logan, W. Va. (Guyandot)-----	859	81. 4
Wayne, W. Va. (Twelvepole Creek)-----	305	28. 8
Williamson, W. Va. (Tug Fork)-----	941	57. 3
Kermit, W. Va. (Tug Fork)-----	1, 268	35. 0
Lock No. 1, Kentucky-West Virginia (Tug Fork)-----	1, 514	3. 8
Pikeville, Ky. (Levisa Fork)-----	1, 225	88. 5
Prestonsburg, Ky. (Levisa Fork)-----	1, 611	54. 9
Paintsville, Ky. (Levisa Fork)-----	-----	38. 5
Lock No. 1, Kentucky (Levisa Fork)-----	2, 279	8. 2
Lock No. 3, Kentucky-West Virginia (Big Sandy)-----	3, 821	26. 6
Lock No. 2, Kentucky-West Virginia (Big Sandy)-----	4, 198	12. 9

(g) Area includes Youghiogheny Basin.

(h) Area includes Licking Creek Basin.

(i) Area includes West Fork Basin.

Drainage areas lying above river gages, and distances of river gages above mouth of river. The name of the river is in parentheses to the right of the station name—
Continued

<i>Station and river</i>	<i>Area</i>	<i>Distance</i>
Lock No. 1, Kentucky-West Virginia (Big Sandy)-----	4, 275	0. 3
Delaware, Ohio (Olentangy)-----	415	26. 2
La Rue, Ohio (Scioto)-----	255	196. 2
Prospect, Ohio (Scioto)-----	554	172. 2
Bellpoint, Ohio (Scioto)-----	770	156. 3
Columbus, Ohio (Scioto) (j)-----	1, 613	131. 9
Circleville, Ohio (Scioto)-----	3, 217	100. 4
Chillicothe, Ohio (Scioto)-----	3, 847	70. 4
Kings Mills, Ohio (Little Miami)-----	1, 048	28. 1
Cynthiana, Ky. (South Fork—Licking)-----	641	46
Farmers, Ky. (Licking)-----	782	172
Falmouth, Ky. (Licking) (k)-----	2, 267	51. 2
Pleasant Hill, Ohio (Stillwater)-----	502	29. 2
Springfield, Ohio (Mad)-----	477	23. 6
Brookville, Ind. (Whitewater)-----	1, 230	27
Sidney, Ohio (Miami)-----	545	134. 8
Piqua, Ohio (Miami)-----	850	122. 1
Tippecanoe City, Ohio (Miami)-----	955	104. 5
Dayton, Ohio (Miami) (l)-----	2, 515	84. 5
Miamisburg, Ohio (Miami)-----	2, 719	68. 6
Franklin, Ohio (Miami)-----	2, 731	61. 3
Middletown, Ohio (Miami)-----	3, 158	53. 6
Hamilton, Ohio (Miami)-----	3, 637	35. 3
Hazard, Ky. (North Fork—Kentucky)-----	442	96. 0
Beattyville, Ky. (Kentucky)-----	1, 856	255. 0
Lock No. 14 (Kentucky)-----	2, 639	249. 3
Lock No. 13 (Kentucky)-----	2, 773	239. 3
Lock No. 12 (Kentucky)-----	2, 908	221. 3
Lock No. 11 (Kentucky)-----	3, 211	201. 3
Lock No. 10 (Kentucky)-----	3, 948	176. 3
Lock No. 9 (Kentucky)-----	4, 124	157. 3
Lock No. 8 (Kentucky)-----	4, 374	139. 3
Lock No. 7 (Kentucky)-----	5, 024	117. 0
Lock No. 6 (Kentucky)-----	5, 119	96. 2
Lock No. 5 (Kentucky)-----	5, 229	82. 2
Lock No. 4 (Kentucky)-----	5, 396	65. 0
Lock No. 3 (Kentucky)-----	6, 036	42. 0
Lock No. 2 (Kentucky)-----	6, 162	31. 0
Lock No. 1 (Kentucky)-----	6, 911	4. 0
Bowling Green, Ky. (Barren)-----	1, 875	29. 5
Lock No. 1 (Barren)-----	1, 915	15. 0
Munfordville, Ky. (Green)-----	1, 707	223
Lock No. 6 (Green)-----	2, 751	180. 6
Lock No. 5 (Green)-----	3, 061	167. 2
Lock No. 4 (Green)-----	5, 446	149. 5
Lock No. 3 (Green)-----	6, 245	108. 5
Lock No. 2 (Green)-----	7, 681	62. 8
Lock No. 1 (Green)-----	9, 170	8. 5
Rochester, Ind. (Tippecanoe)-----	641	-----
Anderson, Ind. (West Fork—White)-----	428	281
Noblesville, Ind. (West Fork—White)-----	844	257
Indianapolis, Ind. (West Fork—White)-----	1, 590	225
Elliston, Ind. (West Fork—White)-----	4, 470	120
Edwardsport, Ind. (West Fork—White)-----	4, 995	30
Seymour, Ind. (East Fork—White)-----	2, 292	118
Williams, Ind. (East Fork—White)-----	4, 584	63. 5
Shoals, Ind. (East Fork—White)-----	4, 828	45
Decker, Ind. (White)-----	11, 135	20
Bluffton, Ind. (Wabash)-----	555	426
Logansport, Ind. (Wabash)-----	3, 860	341

(j) Area includes Olentangy Basin.

(k) Area does not include South Fork Basin.

(l) Area includes basins of Stillwater and Mad.

Drainage areas lying above river gages, and distances of river gages above mouth of river. The name of the river is in parentheses to the right of the station name—
Continued

<i>Station and river</i>	<i>Area</i>	<i>Distance</i>
La Fayette, Ind. (Wabash)-----	7, 324	308. 2
Covington, Ind. (Wabash)-----	8, 399	268
Terre Haute, Ind. (Wabash)-----	12, 333	214. 4
Vincennes, Ind. (Wabash)-----	13, 840	127. 8
Grand Rapids Lock (Wabash)-----	16, 442	97. 1
Mount Carmel, Ill. (Wabash)-----	28, 506	94. 5
New Harmony, Ind. (Wabash)-----	-----	51
New River, Tenn. (New)-----	367	8. 2
Rock Island, Tenn. (Caney Fork)-----	1, 656	80. 0
Williamsburg, Ky. (Cumberland)-----	1, 673	592. 7
Burnside, Ky. (Cumberland)-----	4, 949	518. 4
Lock No. 21, Kentucky (Cumberland)-----	5, 389	489. 7
Lock No. 17, Kentucky (Cumberland) (u)-----	5, 577	474. 2
Lock No. 16, Kentucky (Cumberland) (u)-----	5, 869	463. 3
Lock No. 15, Kentucky (Cumberland) (u)-----	5, 971	440. 5
Lock No. 14, Kentucky (Cumberland) (u)-----	6, 180	421. 3
Lock No. 13, Kentucky (Cumberland) (u)-----	6, 324	399. 1
Lock No. 12, Tennessee (Cumberland) (u)-----	6, 416	385. 1
Celina, Tenn. (Cumberland)-----	7, 323	383. 1
Lock No. 11, Tennessee (Cumberland) (u)-----	7, 496	366. 7
Lock No. 10, Tennessee (Cumberland) (u)-----	7, 858	350. 1
Lock No. 9, Tennessee (Cumberland) (u)-----	8, 068	332. 9
Lock No. 8, Tennessee (Cumberland)-----	8, 126	318. 3
Carthage, Tenn. (Cumberland)-----	10, 754	308. 3
Lock No. 7, Tennessee (Cumberland)-----	10, 831	300. 0
Lock No. 6, Tennessee (Cumberland)-----	10, 993	282. 2
Lock No. 5, Tennessee (Cumberland)-----	11, 198	264. 8
Lock No. 4, Tennessee (Cumberland)-----	11, 641	237. 3
Lock No. 3, Tennessee (Cumberland)-----	11, 731	218. 6
Lock No. 2, Tennessee (Cumberland)-----	12, 740	201. 6
Nashville, Tenn. (Cumberland)-----	12, 878	192. 6
Lock No. 1, Tennessee (Cumberland)-----	12, 880	190. 0
Lock A, Tennessee (Cumberland)-----	14, 188	151. 2
Lock B, Tennessee (Cumberland)-----	14, 409	141. 1
Clarksville, Tenn. (Cumberland)-----	14, 504	127. 4
Lock C, Tennessee (Cumberland)-----	16, 068	109. 4
Lock D, Tennessee (Cumberland)-----	16, 490	88. 2
Lock E, Kentucky (Cumberland)-----	16, 692	65. 7
Lock F, Kentucky (Cumberland)-----	17, 500	43. 6
Mendota, Va. (North Fork—Holston)-----	530	38. 3
Elizabethton, Tenn. (Watauga)-----	665	24. 4
Bluff City, Tenn. (South Fork—Holston)-----	810	34. 2
Rogersville, Tenn. (Holston)-----	3, 033	103. 8
Newport, Tenn. (Pigeon)-----	630	6. 9
Embreeville, Tenn. (Nolichucky)-----	804	77
Asheville, N.C. (French Broad)-----	949	147. 3
Marshall, N.C. (French Broad)-----	1, 361	125. 2
Dandridge, Tenn. (French Broad)-----	4, 428	46. 5
McGhee, Tenn. (Little Tennessee)-----	2, 447	18. 8
Speers Ferry, Va. (Clinch)-----	1, 107	201. 0
Clinton, Tenn. (Clinch)-----	2, 983	59. 5
Kingston, Tenn. (Clinch)-----	4, 312	1. 2
Charleston, Tenn. (Hiwassee)-----	2, 335	18. 8
Fayetteville, Tenn. (Elk)-----	866	88. 4
Columbia, Tenn. (Duck)-----	1, 215	132. 8
Knoxville, Tenn. (Tennessee)-----	8, 935	648. 1
Loudon, Tenn. (Tennessee)-----	12, 258	591. 3
Caney Creek Lock, Tenn. (Tennessee) (t) (u)-----	16, 877	559. 8
Rockwood, Tenn. (Tennessee)-----	16, 903	553. 0
Chattanooga, Tenn. (Tennessee)-----	21, 360	464. 1

(t) Area includes Caney Creek Basin.

(u) Site of proposed lock and dam.

Drainage areas lying above river gages, and distances of river gages above mouth of river. The name of the river is in parentheses to the right of the station name—
Continued

<i>Station and river</i>	<i>Area</i>	<i>Distance</i>
Hales Bar Lock, Tenn. (Tennessee) -----	21, 770	431. 1
Bridgeport, Ala. (Tennessee) -----	22, 596	414. 4
Widows Bar Lock, Ala. (Tennessee) -----	22, 742	408. 0
Bellefonte Island Dam, Ala. (Tennessee) (u) -----	23, 245	392. 0
Guntersville, Ala. (Tennessee) -----	24, 286	358. 1
Decatur, Ala. (Tennessee) -----	26, 816	304. 4
Lock A, Alabama (Tennessee) (m) -----	27, 126	286. 3
Lock B, Alabama (Tennessee) (m) -----	27, 136	285. 0
Lock No. 2 (Wilson Dam), Alabama (Tennessee) -----	30, 684	259. 2
Florence, Ala. (Tennessee) -----	30, 692	256. 5
Riverton Lock, Ala. (Tennessee) -----	31, 465	226. 5
Savannah, Tenn. (Tennessee) -----	33, 009	189. 5
Johnsonville, Tenn. (Tennessee) -----	38, 402	96. 5
Pittsburgh Pa. (Ohio) -----	19, 101	981. 0
Emsworth Dam (Ohio) -----	19, 407	974. 8
Old Dam No. 2 (Ohio) -----	19, 474	971. 8
Dashields Dam (Ohio) -----	19, 500	967. 7
Dam No. 4 (Ohio) -----	19, 570	962. 4
Dam No. 5 (Ohio) (n) -----	19, 612	956. 9
Dam No. 6 (Ohio) -----	22, 754	951. 7
Dam No. 7 (Ohio) -----	22, 952	944. 5
Dam No. 8 (Ohio) -----	23, 503	934. 6
Dam No. 9 (Ohio) -----	23, 823	925. 0
Dam No. 10 (Ohio) -----	23, 941	914. 8
Dam No. 11 (Ohio) -----	24, 374	904. 1
Dam No. 12 (Ohio) -----	24, 614	893. 6
Dam No. 13 (Ohio) -----	25, 139	884. 9
Dam No. 14 (Ohio) -----	25, 749	867. 0
Dam No. 15 (Ohio) -----	26, 192	851. 9
Dam No. 16 (Ohio) -----	26, 271	834. 5
St. Marys, W.Va. (Ohio) -----	26, 852	826. 1
Dam No. 17 (Ohio) -----	26, 979	813. 5
Marietta, Ohio (Ohio) (o) -----	27, 537	809. 0
Dam No. 18 (Ohio) -----	35, 614	801. 1
Parkersburg, W.Va. (Ohio) (p) -----	37, 914	796. 4
Dam No. 19 (Ohio) -----	38, 053	788. 8
Dam No. 20 (Ohio) -----	39, 342	778. 5
Dam No. 21 (Ohio) -----	39, 676	766. 5
Dam No. 22 (Ohio) -----	39, 843	760. 1
Dam No. 23 (Ohio) -----	40, 093	749. 6
Dam No. 24 (Ohio) -----	40, 160	738. 5
Dam No. 25 (Ohio) -----	40, 374	720. 3
Point Pleasant, W.Va. (Ohio) (q) -----	40, 521	715. 8
Dam No. 26 (Ohio) -----	53, 601	702. 5
Dam No. 27 (Ohio) -----	53, 820	680. 0
Dam No. 28 (Ohio) -----	55, 956	669. 4
Dam No. 29 (Ohio) -----	60, 748	661. 1
Dam No. 30 (Ohio) -----	61, 702	641. 6
Portsmouth, Ohio (Ohio) (r) -----	62, 495	625. 0
Dam No. 31 (Ohio) -----	69, 028	621. 7
Dam No. 32 (Ohio) -----	69, 495	598. 4
Dam No. 33 (Ohio) -----	70, 128	575. 9
Dam No. 34 (Ohio) -----	70, 881	546. 9
Dam No. 35 (Ohio) -----	71, 032	530. 0
Dam No. 36 (Ohio) -----	71, 166	520. 1
Cincinnati, Ohio (Ohio) (s) -----	76, 578	510. 8

(m) Area does not include Elk Basin.

(n) Area does not include Beaver Basin.

(o) Area does not include Muskingum Basin.

(p) Area includes Little Kanawha Basin.

(q) Area does not include Kanawha Basin.

(r) Area does not include Scioto Basin.

(s) Area includes Licking Basin.

(u) Site of proposed lock and dam.

Drainage areas lying above river gages, and distances of river gages above mouth of river. The name of the river is in parentheses to the right of the station name—
Continued

<i>Station and river</i>	<i>Area</i>	<i>Distance</i>
Dam No. 37 (Ohio)-----	76, 783	497. 8
Dam No. 38 (Ohio)-----	82, 808	477. 7
Dam No. 39 (Ohio)-----	83, 170	449. 3
Madison, Ind. (Ohio)-----	90, 585	423. 3
Dam No. 41 (Ohio)-----	91, 173	374. 0
Dam No. 43 (Ohio)-----	94, 483	347. 8
Dam No. 44 (Ohio)-----	95, 702	317. 8
Dam No. 45 (Ohio)-----	96, 369	278. 0
Dam No. 46 (Ohio)-----	97, 270	223. 7
Dam No. 47 (Ohio)-----	97, 787	203. 3
Evansville, Ind. (Ohio)-----	107, 052	188. 7
Dam No. 48 (Ohio)-----	107, 573	171. 4
Mount Vernon, Ind. (Ohio)-----	107, 733	151. 8
Dam No. 49 (Ohio)-----	107, 953	136. 0
Shawneetown, Ill. (Ohio)-----	140, 834	123. 2
Dam No. 50 (Ohio)-----	143, 112	104. 2
Dam No. 51 (Ohio)-----	143, 655	77. 9
Paducah, Ky. (Ohio)-----	202, 713	46. 6
Dam No. 52 (Ohio)-----	202, 765	42. 1
Dam No. 53 (Ohio)-----	203, 154	18. 4
Cairo, Ill. (Ohio)-----	203, 943	1. 7

Confluence distances, or distances between mouths of tributary streams

<i>From mouth of—</i>	<i>To mouth of—</i>	<i>Distance</i>
Conewango Creek-----	Allegheny-----	122. 6
French Creek-----	do-----	86. 1
Clarion-----	do-----	51
Little Conemaugh (a)-----	Conemaugh-----	51
Stony Creek (a)-----	do-----	27
Conemaugh (a) (b)-----	Kiskiminitas-----	27
Loyalhanna Creek (b)-----	do-----	30. 2
Kiskiminitas (b)-----	Allegheny-----	981. 0
Allegheny (c)-----	Ohio-----	128. 1
Tygart (d)-----	Monongahela-----	128. 1
West Fork—Monongahela (d)-----	do-----	89. 1
Cheat-----	do-----	15. 7
Castleman-----	Youghiogheny-----	981. 0
Youghiogheny-----	Monongahela-----	22. 5
Monongahela (c) (d)-----	Ohio-----	22. 5
Mahoning (e)-----	Beaver-----	955. 6
Shenango (e)-----	do-----	107. 0
Beaver (e)-----	Ohio-----	107. 0
Walhonding (f)-----	Muskingum-----	808. 8
Stillwater Creek-----	Tuscarawas-----	796. 4
Tuscarawas (f)-----	Muskingum-----	781. 6
Muskingum (f)-----	Ohio-----	244
Little Kanawha-----	do-----	244
Hocking-----	do-----	66
South Fork—New (g)-----	New-----	96
North Fork—New (g)-----	do-----	96
Greenbrier-----	do-----	57. 2
New (g) (h)-----	Kanawha-----	
Gauley (h)-----	do-----	
Elk-----	do-----	

- (a) The Conemaugh is formed by the confluence of the Little Conemaugh and Stony Creek.
 (b) The Kiskiminitas is formed by the confluence of the Conemaugh and Loyalhanna Creek.
 (c) The Ohio is formed by the confluence of the Allegheny and Monongahela.
 (d) The Monongahela is formed by the confluence of the Tygart and West Fork.
 (e) The Beaver is formed by the confluence of the Mahoning and Shenango.
 (f) The Muskingum is formed by the confluence of the Walhonding and Tuscarawas.
 (g) The New is formed by the confluence of the South Fork and North Fork.
 (h) The Kanawha is formed by the confluence of the New and Gauley.

Confluence distances, or distances between mouths of tributary streams—Continued

<i>From mouth of—</i>	<i>To mouth of—</i>	<i>Distance</i>
Coal	Kanawha	
Pocatalico	do	38
Kanawha (h)	Ohio	715. 3
Guyandot	do	675. 8
Twelvepole Creek	do	667. 7
Tug Fork (i)	Big Sandy	27. 0
Levisa Fork (i)	do	27. 0
Big Sandy (i)	Ohio	663. 9
Olentangy	Scioto	
Scioto	Ohio	624. 5
Little Miami	do	516. 9
South Fork—Licking	Licking	51. 1
Licking	Ohio	510. 8
Stillwater	Miami	85. 8
Mad	do	84. 7
Whitewater	do	4. 8
Miami	Ohio	489. 9
Middle Fork—Kentucky	North Fork—Kentucky	3. 0
North Fork—Kentucky (j)	Kentucky	255. 0
South Fork—Kentucky (j)	do	255. 0
Dix	do	118
Kentucky (j)	Ohio	435. 3
Salt	do	351. 2
Barren	Green	150. 0
Rough	do	71. 1
Green	Ohio	196. 8
Tippecanoe	Wabash	
Vermilion	do	
Sugar Creek	do	
Embarrass	do	
West Fork—White (k)	White	
East Fork—White (k)	do	
White (k)	Wabash	95. 6
Skillet Fork	Little Wabash	
Little Wabash	Wabash	
Wabash	Ohio	133. 0
Saline	do	113. 7
Tradewater	do	107. 6
New	South Fork—Cumberland	
Clear Fork—Cumberland	do	
South Fork—Cumberland	Cumberland	518. 2
Caney Fork—Cumberland	do	309. 3
Cumberland	Ohio	60. 6
North Fork—Holston (l)	Holston	141. 0
Watauga	South Fork—Holston	19. 9
South Fork—Holston (l)	Holston	141. 0
Holston (l) (m)	Tennessee	652. 1
Pigeon	French Broad	75. 2
Nolichucky	do	70. 5
Little Pigeon	do	28. 6
French Broad (m)	Tennessee	652. 1
Little Tennessee	do	601. 0
Emery	Clinch	
Clinch	Tennessee	567. 8
Hiwassee	do	500. 5
Elk	do	285. 1
Duck	do	110. 5
Tennessee (m)	Ohio	48. 4
Ohio (c)	Mississippi	1, 067. 7

(c) The Ohio is formed by the confluence of the Allegheny and Monongahela.

(h) The Kanawha is formed by the confluence of the New and Gauley.

(i) The Big Sandy is formed by the confluence of the Tug Fork and Levisa Fork.

(j) The Kentucky is formed by the confluence of the North Fork and South Fork.

(k) The White is formed by the confluence of the West Fork and East Fork.

(l) The Holston is formed by the confluence of the North Fork and South Fork.

(m) The Tennessee is formed by the confluence of the Holston and French Broad.

MISSISSIPPI RIVER SYSTEM—WHITE BASIN

Drainage areas (in square miles) of the subbasins comprising the White Basin

James	1, 518
Buffalo	1, 368
North Fork—White	1, 822
Current (b)	2, 764
Spring (b)	2, 334
Black and minor tributaries (b)	3, 537
Black, entire basin	8, 635
Little Red	1, 828
Cache	1, 793
White and minor tributaries	10, 795
White, entire basin (c)	27, 759

(b) Included in "Black, entire basin."
(c) White, above the mouth of the Black drains 11,358 square miles.

Drainage areas lying above river gages, and distances of river gages above mouth of river. The name of the river is in parentheses to the right of the station name

Station and river	Area	Distance
Gilbert, Ark. (Buffalo)	861	55
Leeper, Mo. (Black)	994	250. 5
Williamsville, Mo. (Black)	1, 159	237
Poplar Bluff, Mo. (Black)	1, 296	211
Black Rock, Ark. (Black) (b)	7, 490	69
Patterson, Ark. (Cache)	807	80
Ozark Beach, Mo. (White)	4, 473	508
Cotter, Ark. (White)	6, 194	403
Calico Rock, Ark. (White)	10, 053	360. 5
Batesville, Ark. (White)	11, 123	301
Newport, Ark. (White)	19, 999	258
Georgetown, Ark. (White)	22, 683	171
De Valls Bluff, Ark. (White)	23, 779	124
Clarendon, Ark. (White)	25, 660	100

(b) Area includes Spring Basin.

Confluence distances, or distances between mouths of tributary streams

From mouth of—	To mouth of—	Distance
James	White	
Buffalo	do	389
North Fork—White	do	
Current	Black	
Spring	do	
Black	White	264. 5
Little Red	do	182. 5
Cache	do	101. 0
White	Mississippi	678. 7

MISSISSIPPI RIVER SYSTEM—ARKANSAS BASIN

Drainage areas (in square miles) of the subbasins comprising the Arkansas Basin

Fountain Creek	940
Huerfano	1, 838
Apishapa	1, 091
Purgatoire	3, 369
Big Sandy Creek	3, 253
Pawnee	2, 620
Walnut Creek	1, 725
Little Arkansas	1, 422
Ninnescah	2, 067

Drainage areas (in square miles) of the subbasins comprising the Arkansas Basin—
Continued

Walnut	1, 987
Salt Fork	6, 811
Cimarron	19, 258
Caney (b)	2, 151
Verdigris and minor tributaries (b)	6, 031
Verdigris, entire basin	8, 182
Cottonwood (c)	1, 792
Spring (c)	2, 619
Neosho and minor tributaries (c)	8, 238
Neosho, entire basin	12, 649
Mora (d)	1, 508
Ute Creek (d)	2, 072
North Canadian (d)	17, 593
Canadian and minor tributaries (d)	26, 465
Canadian, entire basin	47, 638
Petit Jean Creek	1, 019
Arkansas and minor tributaries	44, 596
Arkansas, entire basin	160, 465

(b) Included in "Verdigris, entire basin."

(c) Included in "Neosho, entire basin."

(d) Included in "Canadian, entire basin."

Drainage areas lying above river gages, and distances of river gages above mouth of river. The name of the river is in parentheses to the right of the station name

Station and river	Area	Distance
Fountain, Colo. (Fountain)	548	40
Pueblo, Colo. (Fountain)	939	-----
Trinidad, Colo. (Purgatoire)	788	125
Higbee, Colo. (Purgatoire)	2, 866	30
Sedgwick, Kans. (Little Arkansas)	1, 277	28. 7
Hellers Grove, Kans. (Little Arkansas)	1, 368	-----
Wichita, Kans. (Little Arkansas)	1, 421	1. 5
Winfield, Kans. (Walnut)	1, 856	27
Perkins, Okla. (Cimarron)	18, 248	76
Independence, Kans. (Verdigris)	2, 748	207
Sageeyah, Okla. (Verdigris)	4, 213	94
Okay, Okla. (Verdigris)	8, 170	4
Elmdale, Kans. (Cottonwood)	1, 009	62
Emporia, Kans. (Cottonwood)	1, 737	13. 5
Neosho Rapids, Kans. (Neosho)	2, 691	372
Le Roy, Kans. (Neosho)	3, 396	322
Iola, Kans. (Neosho)	3, 731	288
Chanute, Kans. (Neosho)	4, 232	262
Parsons, Kans. (Neosho)	4, 905	200
Oswego, Kans. (Neosho)	4, 957	183. 5
Wyandotte, Okla. (Neosho) (b)	8, 761	130. 5
Pensacola, Okla. (Neosho)	10, 432	68
Fort Gibson, Okla. (Neosho)	12, 645	2. 5
Woodward, Okla. (North Canadian)	11, 405	455
Canton, Okla. (North Canadian)	12, 388	393
El Reno, Okla. (North Canadian)	12, 910	317
Oklahoma City, Okla. (North Canadian)	13, 167	265
Logan, N.Mex. (Canadian)	10, 840	668. 5
Canadian, Tex. (Canadian)	22, 936	441
Camargo, Okla. (Canadian)	24, 254	360. 5
Union, Okla. (Canadian)	25, 692	245
Calvin, Okla. (Canadian)	28, 125	105
Danville, Ark. (Petit Jean)	733	34
Salida, Colo. (Arkansas)	1, 195	1, 366
Canon City, Colo. (Arkansas)	3, 091	1, 310

(b) Area includes Spring Basin.

Drainage areas lying above river gages, and distances of river gages above mouth of river. The name of the river is in parentheses to the right of the station name—
Continued

<i>Station and river</i>	<i>Area</i>	<i>Distance</i>
Pueblo, Colo. (Arkansas) (c)-----	4, 795	1, 264
Fort Lyon, Colo. (Arkansas)-----	17, 908	1, 156
Lamar, Colo. (Arkansas)-----	19, 585	1, 122
Dodge City, Kans. (Arkansas)-----	29, 937	970
Great Bend, Kans. (Arkansas)-----	33, 977	873
Hutchinson, Kans. (Arkansas)-----	38, 535	816
Wichita, Kans. (Arkansas) (d)-----	40, 222	770
Oxford, Kans. (Arkansas)-----	42, 854	731
Arkansas City, Kans. (Arkansas) (e)-----	45, 276	708
Ralston, Okla. (Arkansas)-----	54, 065	598
Tulsa, Okla. (Arkansas)-----	74, 592	530
Webbers Falls, Okla. (Arkansas)-----	96, 964	433
Fort Smith, Ark. (Arkansas)-----	149, 912	373
Ozark, Ark. (Arkansas)-----	151, 706	322
Dardanelle, Ark. (Arkansas)-----	153, 570	265
Morrilton, Ark. (Arkansas)-----	155, 339	233
Little Rock, Ark. (Arkansas)-----	157, 943	178
Pine Bluff, Ark. (Arkansas)-----	158, 529	117
Yancopin, Ark. (Arkansas)-----	160, 422	23

(c) Area does not include Fountain Creek Basin.

(d) Area includes Little Arkansas Basin.

(e) Area includes Walnut Basin.

Confluence distances, or distances between mouths of tributary streams

<i>From mouth of</i>	<i>To mouth of—</i>	<i>Distance</i>
Fountain Creek-----	Arkansas-----	1, 264
Huerfano-----	do-----	-----
Apishapa-----	do-----	-----
Purgatoire-----	do-----	1, 159
Big Sandy Creek-----	do-----	-----
Pawnee-----	do-----	-----
Walnut Creek-----	do-----	-----
Little Arkansas-----	do-----	770. 5
Ninnescah-----	do-----	-----
Walnut-----	do-----	703
Salt Fork-----	do-----	-----
Cimarron-----	do-----	547
Caney-----	Verdigris-----	-----
Verdigris-----	Arkansas-----	466
Cottonwood-----	Neosho-----	380
Spring-----	do-----	-----
Neosho-----	Arkansas-----	465
Mora-----	Canadian-----	-----
Ute Creek-----	do-----	-----
North Canadian-----	do-----	43
Canadian-----	Arkansas-----	427
Petit Jean Creek-----	do-----	246
Arkansas-----	Mississippi-----	670. 3

MISSISSIPPI RIVER SYSTEM—RED BASIN

(Including Black and its tributary streams)

Drainage areas (in square miles) of the subbasins comprising the Red Basin

Black and tributary basins:

Little Missouri-----	2, 075	
Saline-----	3, 294	
Boeuf-----	3, 367	
Ouachita and minor tributaries-----	11, 308	
Ouachita, entire basin (a)-----	20, 044	
Tensas (a)-----	1, 231	
Black and minor tributaries-----	334	
Black, entire basin-----		21, 609

(a) See areas under explanatory matter.

Drainage areas (in square miles) of the subbasins comprising the Red Basin—Con.

Red Basin proper:

Prairie Dog Town Fork (a)	10, 847✓	
North Fork (a)	4, 851✓	
Wichita	3, 364✓	
Washita	7, 752✓	
Little	4, 232✓	
Sulphur	3, 959✓	
Cypress Bayou (to Caddo Lake)	2, 120	
Caddo and Cross Lakes	1, 360	
Cypress Bayou, and Caddo and Cross Lakes	3, 480	
Loggy Bayou	1, 435	
Red and minor tributaries	30, 650	
Red Basin, exclusive of Black		70, 570
Red, entire basin		92, 179

(a) See areas under explanatory matter.

Drainage areas lying above river gages, and distances of river gages above mouth of river. The name of the river is in parentheses to the right of the station name

Station and river	Area	Distance
Arkadelphia, Ark. (Ouachita)	2, 320	361. 4
Camden, Ark. (Ouachita)	5, 373	295. 1
Monroe, La. (Ouachita)	15, 700	125. 6
Jonesville, La. (Black)	21, 275	55. 9
Whitecliffs, Ark. (Little)	3, 472	55
Ringo Crossing, Tex. (Sulphur)	1, 187	-----
Naples, Tex. (Sulphur)	2, 751	-----
Jefferson, Tex. (Cypress)	887	-----
Ninock, La. (Lake Bisteneau)	1, 397	-----
Denison, Tex. (Red)	38, 711	763
Arthur City, Tex. (Red)	43, 483	666. 2
Index (Miller County), Ark. (Red)	46, 943	509. 2
Fulton, Ark. (Red)	51, 244	482
Springbank, Ark. (Red) (b)	55, 688	-----
Shreveport, La. (Red) (c)	59, 657	306. 3
Grand Ecore, La. (Red)	63, 248	205. 6
Alexandria, La. (Red)	65, 900	117. 8

(b) Area includes Sulphur Basin.

(c) Area includes basin of Cypress Bayou, and Caddo and Cross Lakes.

Confluence distances, or distances between mouths of tributary streams

From mouth of—	To mouth of—	Distance
✓ Little Missouri	Ouachita	-----
✓ Saline	do	-----
✓ Boeuf	do	-----
✓ Ouachita (a)	Black	57. 4
✓ Tensas (a)	do	-----
✓ Black (a)	Red	-----
✓ Prairie Dog Town Fork (b)	do	-----
✓ North Fork (b)	do	-----
✓ Wichita	do	-----
✓ Washita	do	-----
✓ Little	do	-----
✓ Sulphur	do	-----
✓ Cypress Bayou	Caddo Lake	-----
✓ Caddo Lake (through canals)	Red	-----
✓ Cross Lake (through canals)	do	-----
✓ Loggy Bayou	do	-----
✓ Red (b)	Mississippi	298. 0

(a) The Black is formed by the confluence of the Ouachita and Tensas.

(b) The Red is formed by the confluence of the Prairie Dog Town Fork and North Fork.

MISSISSIPPI RIVER SYSTEM—LOWER MISSISSIPPI BASIN

Drainage areas (in square miles) of the subbasins comprising the Lower Mississippi Basin

Forked Deer (b) -----	2, 190	
Obion and minor tributaries (b) -----	2, 512	
Obion, entire basin -----		4, 702
Hatchee -----		2, 493
Loosa Hatchee and Wolf -----		1, 570
St. Francis -----		6, 941
Yocona (c) -----	731	
Coldwater (c) -----	1, 920	
Tallahatchie and minor tributaries (c) -----	2, 902	
Tallahatchie, entire basin (a) (d) -----		5, 553
Yalobusha (a) (d) -----		1, 893
Sunflower (d) -----		2, 685
Yazoo and minor tributaries (d) -----		2, 945
Yazoo, entire basin -----		13, 076
Big Black (Mississippi) -----		3, 457
Lower Mississippi and minor tributaries (e) -----		11, 835
Lower Mississippi, entire basin (e) -----		44, 074

(a) See areas under explanatory matter.

(b) Included in "Obion, entire basin."

(c) Included in "Tallahatchie, entire basin."

(d) Included in "Yazoo, entire basin."

(e) Below the mouth of the Ohio.

Drainage areas lying above river gages, and distances of river gages above mouth of river. The name of the river is in parentheses to the right of the station name

Station and river	Area	Distance
Manila, Ark. (Big Lake Outlet) -----	342	
Chaonia, Mo. (St. Francis) -----	1, 175	346
Fisk, Mo. (St. Francis) -----	1, 467	315
St. Francis, Ark. (St. Francis) -----	1, 834	256
Marked Tree, Ark. (St. Francis) -----	4, 327	148
Parkin, Ark. (St. Francis) -----	4, 719	
Madison, Ark. (St. Francis) -----	5, 170	
Swan Lake, Miss. (Tallahatchie) -----	5, 142	71. 4
Greenwood, Miss. (Yazoo) -----	7, 450	175
Yazoo City, Miss. (Yazoo) -----	9, 006	77
New Madrid, Mo. (Mississippi) -----	913, 161	998. 7
Cottonwood Point, Mo. (Mississippi) -----	914, 588	945. 2
Memphis, Tenn. (Mississippi) -----	924, 217	841. 2
Helena, Ark. (Mississippi) -----	931, 869	762. 6
Arkansas City, Ark. (Mississippi) (b) -----	1, 120, 813	633. 0
Greenville, Miss. (Mississippi) -----	1, 120, 963	589. 5
Vicksburg, Miss. (Mississippi) (c) -----	1, 134, 775	467. 9
Natchez, Miss. (Mississippi) -----	1, 140, 343	364. 0
Angola, La. (Mississippi) (d) -----	1, 234, 537	298. 3
Baton Rouge, La. (Mississippi) -----	1, 235, 271	227. 3
Plaquemine, La. (Mississippi) -----		206. 9
Donaldsonville, La. (Mississippi) -----	1, 235, 374	174. 3
Reserve, La. (Mississippi) -----	1, 235, 444	137. 5
New Orleans, La. (Mississippi) -----	1, 235, 498	103. 0

(b) Area includes basins of White and Arkansas.

(c) Area includes Yazoo Basin.

(d) Area includes entire Red Basin.

Confluence distances, or distances between mouths of tributary streams

From mouth of—	To mouth of—	Distance
Ohio	Mississippi	1, 067. 7
Forked Deer	Obion	
Obion	Mississippi	
Hatchee	do	
Loosa Hatchee and Wolf	do	
St. Francis	do	772. 6
White	do	678. 7
Arkansas	do	670. 3
Yocona	Tallanatchie	
Coldwater	do	
Tallahatchie	Yazoo	
Yalobusha	do	
Sunflower	do	
Yazoo	Mississippi	467. 9
Big Black (Mississippi)	do	421. 7
Red	do	298. 0

MISSISSIPPI RIVER SYSTEM—ATCHAFALAYA BASIN

The actual drainage area of the Atchafalaya Basin is indeterminate; a planimeter measurement indicates that the area that normally would be drained by the Atchafalaya, below its head, is 2,854 square miles.

The drainage areas lying above river gages are indeterminate. The distances given below have been measured from the mouth of the Red River to the several gages on the Atchafalaya

Station	Distance
Barbre Landing, La	0. 0
Simmesport, La	5
Melville, La	31
Atchafalaya, La	61. 6
Morgan City, La. (b)	123. 8

(b) Distance given is via Chicot Pass and Grand Lake; via Grand River it is 148.3 miles.



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